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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,521	07/09/2001	Joseph P. Tunney	47440-040000	7156

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Stephen T. Scherrer
McDermott, Will & Emery
31st Floor
227 West Monroe Street
Chicago, IL 60606

EXAMINER

RINEHART, KENNETH

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,521

Applicant(s)

TUNNEY ET AL.

Examiner

Kenneth B Rinehart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-22, 25, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 15, 16, 23, 24 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 7, 8, 12, 13, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the tank" in the tank. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the first pipe" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the heat exchange means" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the vacuum pump" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the caustic material" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 line 6 refers to and which renders the claim indefinite.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural

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cooperative relationships are: the connection between the system of claim 1 and the heating means and heat exchange means

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 11, 12-14, 18, 20, 21, 25, 27, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Mehta et al. Mehta et al shows a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (10, fig.); a nitrogen gas storage tank wherein the nitrogen gas storage tank is attachable to a first valve on the container (82, fig.), a tank containing a neutralizing material connected to the container via a pipe (64, fig.), a vacuum pump disposed between the container and the tank for pumping the chemicals from the container to the tank (69, fig.) a heat exchange means connected to the nitrogen gas storage tank via a first pipe wherein the nitrogen gas within the first pipe is heated by the heat exchange means (col. 7, line 7), controller interconnected with the plurality of valves for controlling the opening and closing of the valves (col. 6, lines 40-45), the controller controls the opening and closing of the plurality of valves in synchronization with the vacuum pump (col. 6, lines 40-45), a controller interconnected with the plurality of valves of valves and the vacuum pump for controlling the opening and closing of the valves and for controlling the operation of the vacuum pump (col 6, lines 40-45) a gauge attached to the container for measuring the internal pressure of the container (col. 7 lines 35-37), an intake means for

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blowing air into the container via a first pipe (82, fig.), the air is regulated into the container via a first valve wherein the first valve is connected to a controlling means (82, fig. Col. 6, lines 40-45), a first pipe attached to the intake means and further wherein a heating means is attached to the first pipe for heating the air flowing thru the first pipe (col.7, lines 6-9, col. 6, lines 23-26), a first pipe attached to the intake means and further wherein a drying means is attached to the first pipe for drying the air flowing thru the first pipe (col.7, lines 6-9, col. 6, lines 23-26), a pressure gauge attached to one of the plurality of valves for measuring the pressure within the tank (col. 7 lines 35-37),

Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota et al. Kubota et al shows a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (2, fig. 3); a nitrogen gas storage tank wherein the nitrogen gas storage tank is attachable to a first valve on the container (G, fig. 3), a tank containing a neutralizing material connected to the container via a pipe (4, fig. 3), a vacuum pump disposed between the container and the tank for pumping the chemicals from the container to the tank (P, fig. 3), the plurality of valves regulates a flow of nitrogen gas from the nitrogen gas storage tank and the container (fig. 3),

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta et al in view of Turner. Mehta et al discloses a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (10, fig.); a tank containing a neutralizing material connected to the container via a pipe (64, fig.), an intake means for blowing air into the container via a first pipe (82, fig.). Mehta et al discloses applicant's invention substantially as claimed with the exception of a control panel having a plurality of switches for controlling the system. Turner teaches a control panel having a plurality of switches for controlling the system for the purpose of permitting entry of various user inputs (col. 3, lines 10-16). It would have been obvious to one of ordinary skill in the art to modify Mehta et al by including a control panel having a plurality of switches for controlling the system as taught by Turner for the purpose of permitting entry of various user inputs.

Claims 3, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al in view of Schmit. Kubota et al discloses a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (2, fig. 3); a nitrogen gas storage tank wherein the nitrogen gas storage tank is attachable to a first valve on the container (G, fig. 3), a tank containing a neutralizing material connected to the container via a pipe (4, fig. 3). Kubota et al discloses applicant's invention substantially as claimed with the exception of a heat exchange means connected to the nitrogen gas storage tank via a first pipe wherein nitrogen gas within the first pipe is heated by the heat exchange means, a nitrogen vaporizer attached to a second section of the first pipe for vaporizing the nitrogen from the nitrogen storage tank. Schmit teaches a heat exchange means connected to the nitrogen gas storage tank via a first pipe wherein nitrogen gas within the first pipe is heated by the heat

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exchange means(56, fig.1) for the purpose of preheating the inert gas. It would have been obvious to one of ordinary skill in the art to modify Kubota et al by including a heat exchange means connected to the nitrogen gas storage tank via a first pipe wherein nitrogen gas within the first pipe is heated by the heat exchange means as taught by Schmit for the purpose of preheating the inert gas and thus facilitating the drying process. Schmit teaches a nitrogen vaporizer attached to a second section of the first pipe for vaporizing the nitrogen from the nitrogen storage tank (62, fig.1) for the purpose of fixing the gas flow. It would have been obvious to one of ordinary skill in the art to modify Kubota et al by including a nitrogen vaporizer attached to a second section of the first pipe for vaporizing the nitrogen from the nitrogen storage tank as taught by Schmit for the purpose of fixing the gas flow to better control the process.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta. Mehta discloses a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (10, fig.); a nitrogen gas storage tank wherein the nitrogen gas storage tank is attachable to a first valve on the container (82, fig.), a tank containing a neutralizing material connected to the container via a pipe (64, fig.). Mehta discloses applicant's invention substantially as claimed with the exception of a railcar, disposed on a vehicle . It would have been an obvious matter of design choice to modify Mehta to provide a railcar, disposed on a vehicle, since applicant has not disclosed that a railcar, disposed on a vehicle solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill and it appears that the claimed feature does not

distinguish the invention over similar features in the prior art, since it is not inventive to make an old device portable or moveable without producing any new or unexpected.

Claims 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta in view of Neubauer et al. Mehta discloses a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (10, fig.); a nitrogen gas storage tank wherein the nitrogen gas storage tank is attachable to a first valve on the container (82, fig.), a tank containing a neutralizing material connected to the container via a pipe (64, fig.). Mehta discloses applicant's invention substantially as claimed with the exception of a pipe within the container and attached to a valve and extending partially within the container, a first pipe within the container and attached to a valve wherein the first pipe within the container extends to a bottom of the container. Neubauer et al teaches a first pipe within the container and attached to a valve wherein the first pipe within the container extends to a bottom of the container a (40, 49, fig. 1) a pipe within the container and attached to a valve and extending partially within the container, (40, 49, fig. 1) for the purpose of facilitating removal of material. It would have been obvious to one of ordinary skill in the art to modify Mehta et al by including a pipe within the container and attached to a valve and extending partially within the container as taught by Neubauer et al for the purpose of facilitating removal of material.

Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta. Mehta discloses a container having a plurality of chemicals therein wherein the container has a plurality of valves for attaching a plurality of pipes thereto (10, fig.); an intake means for blowing air into the container via a first pipe (82, fig.); a tank containing a neutralizing material connected to the container via a pipe (64, fig.). Mehta discloses applicant's invention substantially as claimed

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with the exception of the intake means comprises a fan. It would have been an obvious matter of design choice to modify Mehta to provide the intake means comprises a fan, since applicant has not disclosed that the intake means comprises a fan solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill and it appears that the claimed feature does not distinguish the invention over similar features in the prior art, since the intake means of Mehta will perform the invention as claimed by the applicant.

Allowable Subject Matter

Claims 15, 16, 23, 24, and 26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chang shows a method for drying wafers. Wang et al shows an apparatus for rapidly drying a wet porous gel monolith. Rickard shows a method for removing VOCs. Tannous et al show vessels. Isaksson shows pressurized reactors. White et al shows a method for controlling gas flow. Chen et al shows a method for purging and passivating a semiconductor processing chamber. Rey et al shows a lyophilisation process. Kieselbach et al shows a rapidly drying oven.

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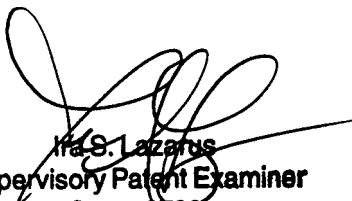
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 703-308-1722.

The examiner can normally be reached on 7:30-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-2597. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7764 for regular communications and 703-308-7764 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

KBR
March 16, 2002



Ira S. Lazarus
Supervisory Patent Examiner
Group 3700